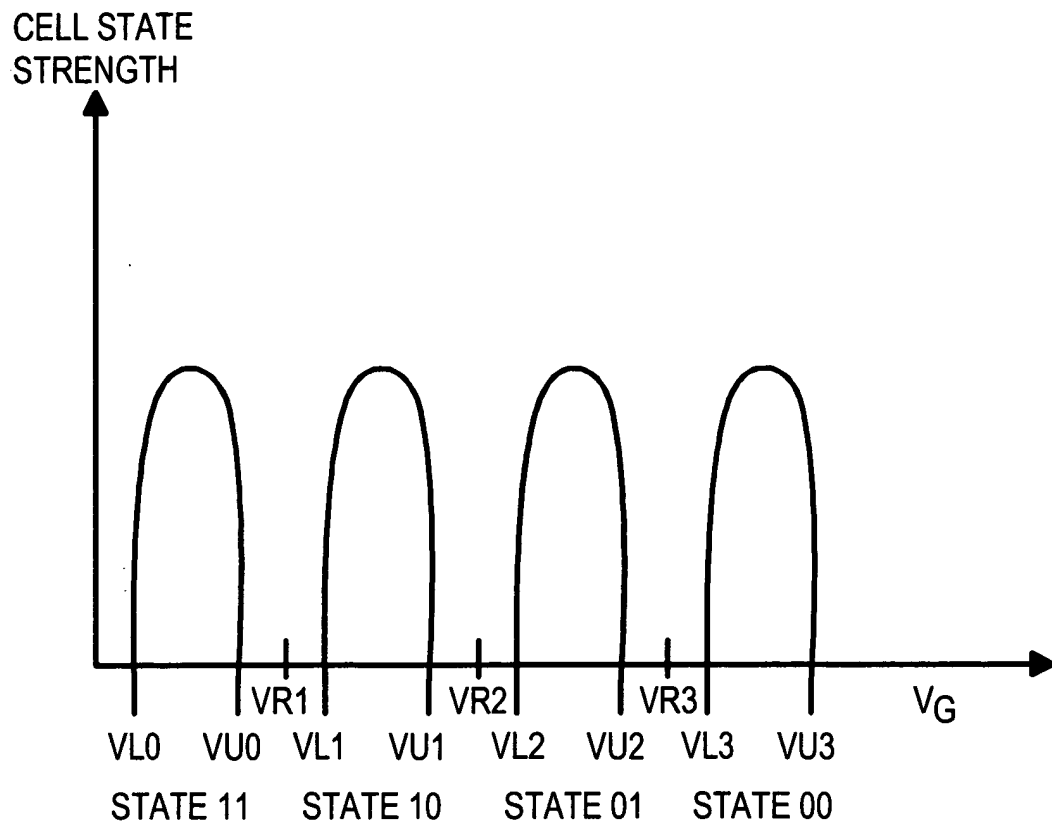


FIG. 1



PRIOR ART

FIG. 2

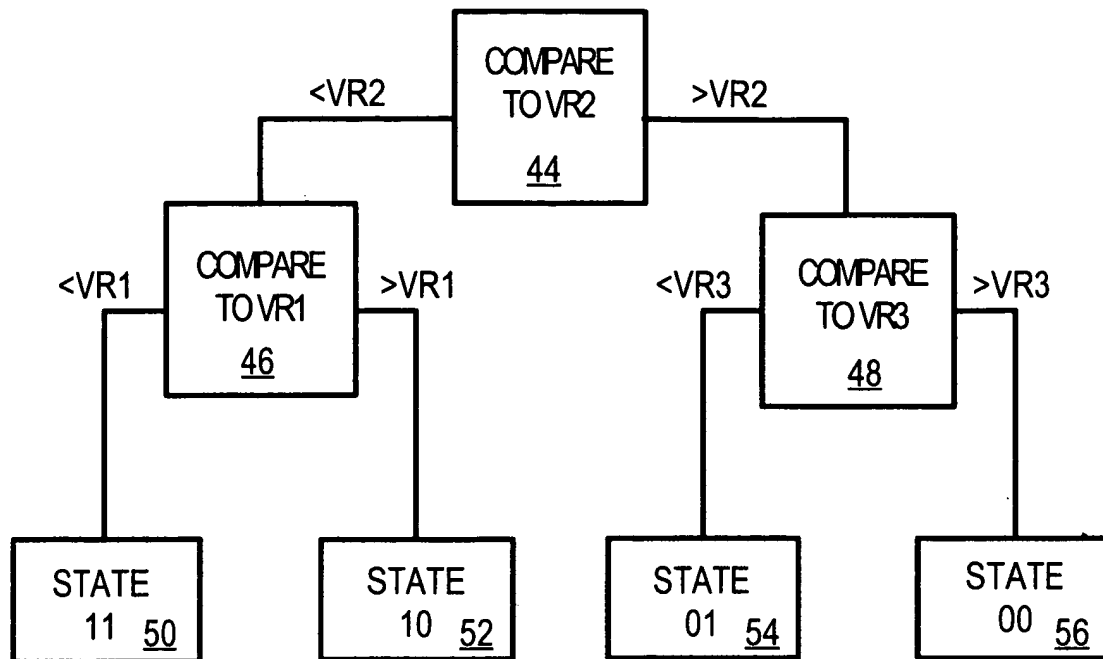


FIG. 3 PRIOR ART

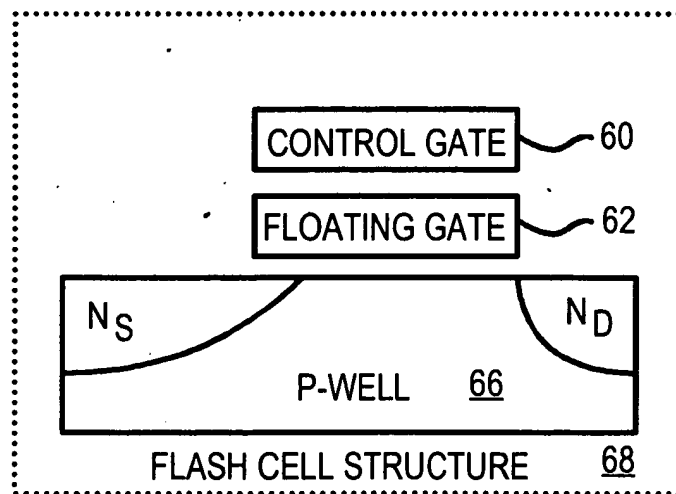


FIG. 4A

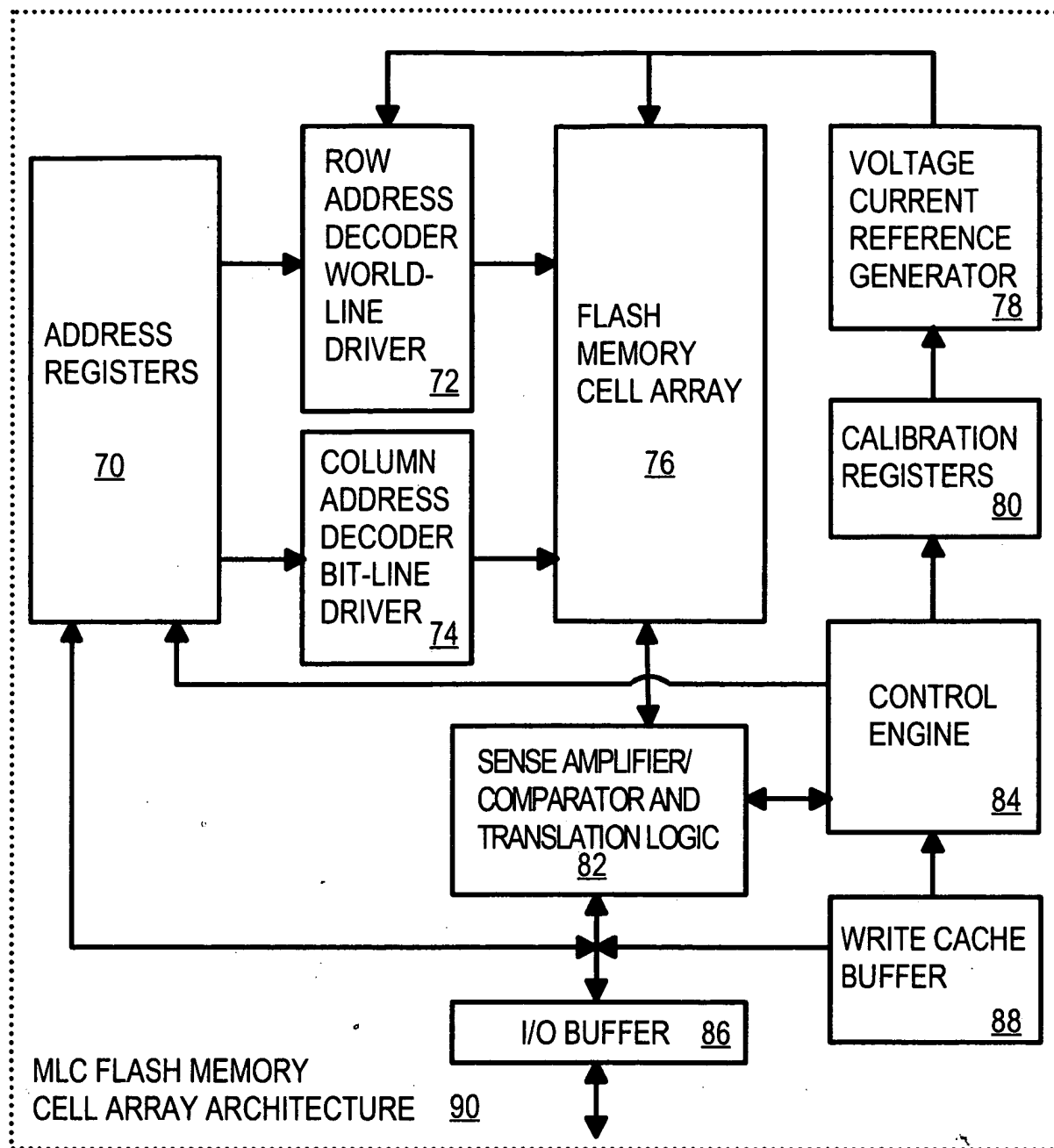


FIG. 4B

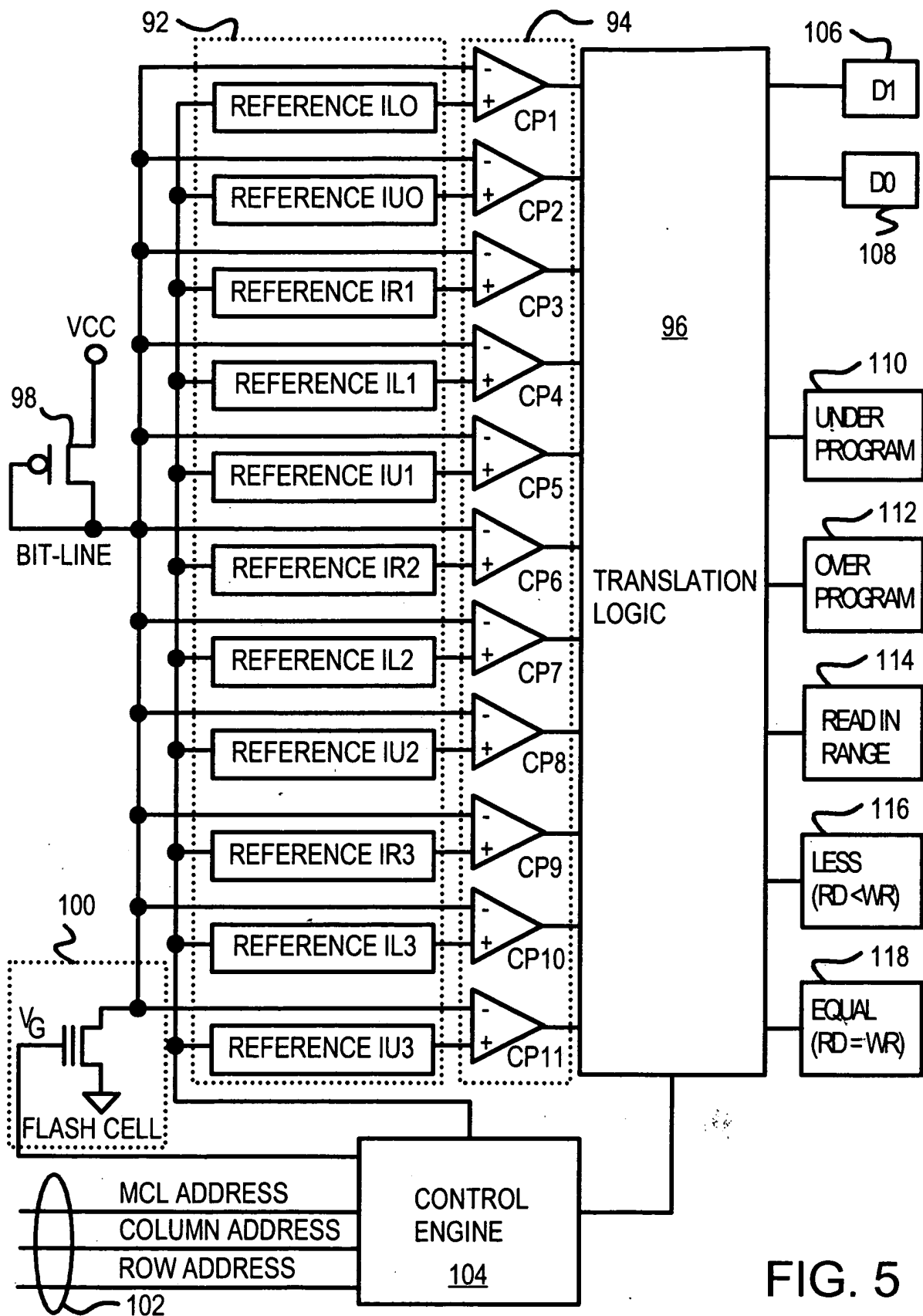


FIG. 5

<b>CELL SIZE</b>	<b>PRIOR ART READ ACCESS TIME</b>	<b>INVENTION READ ACCESS TIME</b>
<b>2-BIT PER CELL</b>	<b>TC + 2TS + TR</b>	<b>TC + TS + TR</b>
<b>3-BIT PER CELL</b>	<b>TC + 3TS + TR</b>	<b>TC + TS + TR</b>
<b>N-BIT PER CELL</b>	<b>TC + nTS + TR</b>	<b>TC + TS + TR</b>
<b>DEFINITIONS</b>	<b>TC: READ ACCESS TIME FOR FLASH CELL</b> <b>TS: SENSE AMP/COMPARATOR RESPONSE TIME</b> <b>TR: TRANSLATION LOGIC DECODING TIME</b>	

**FIG. 6**

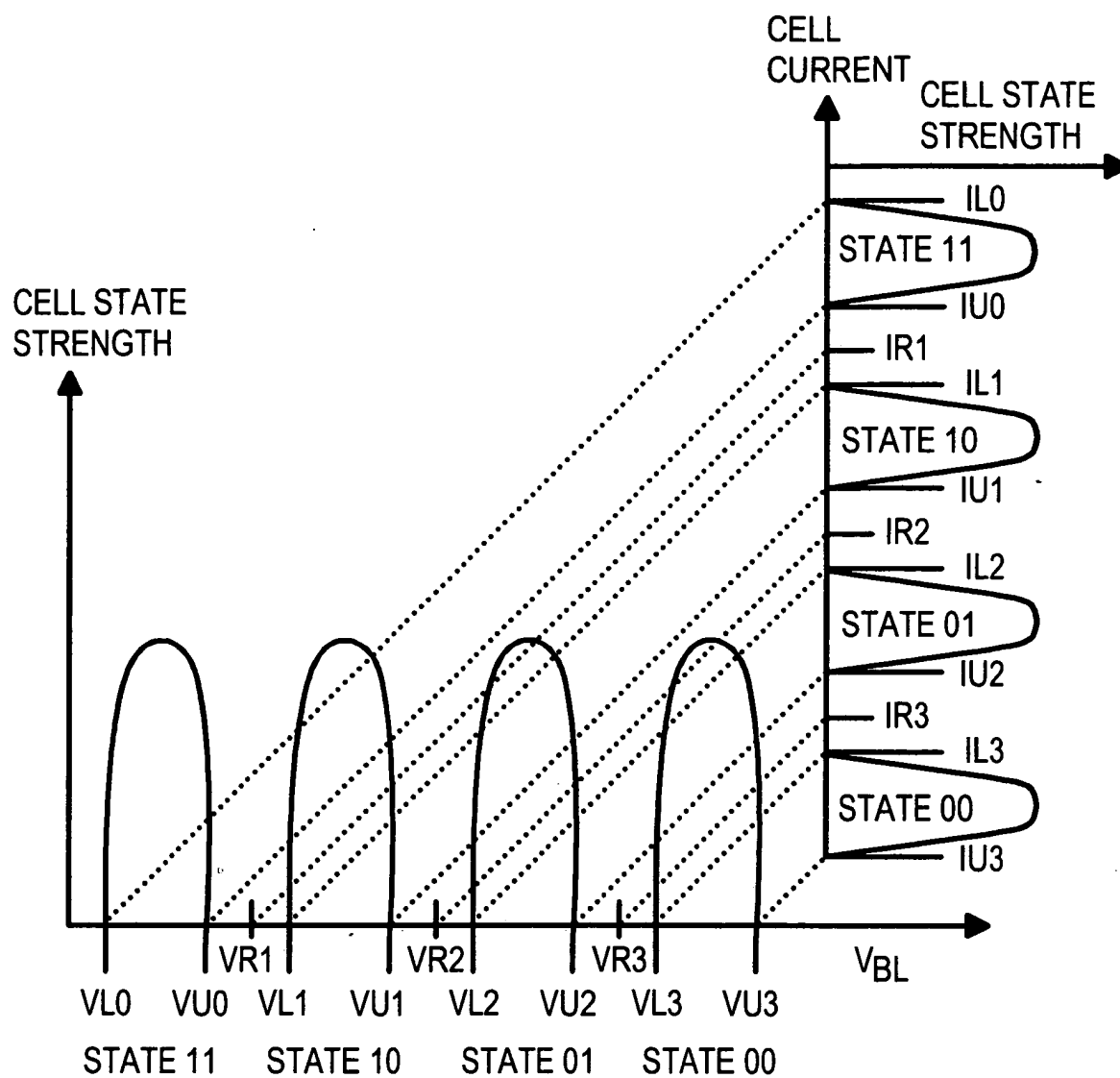
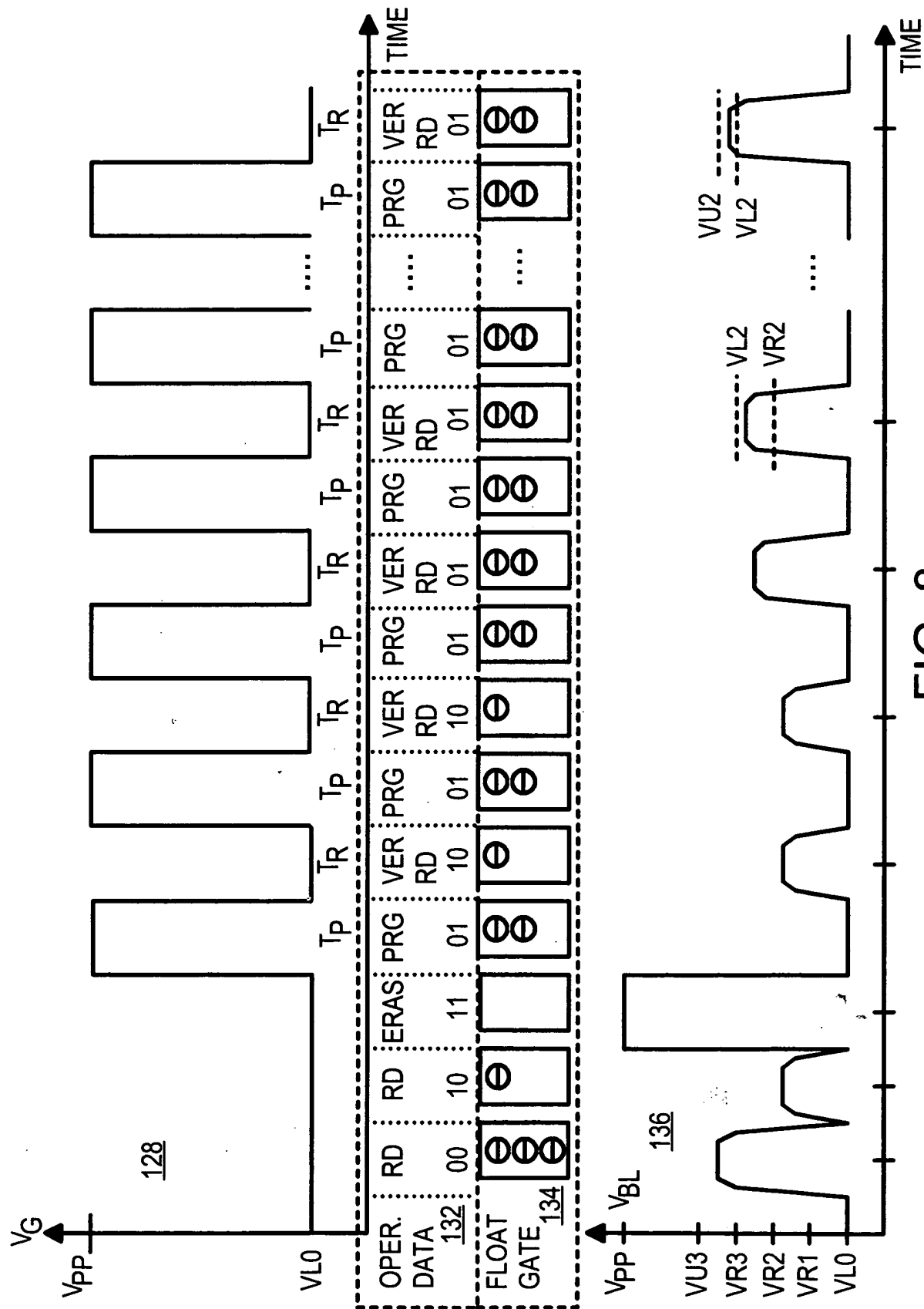


FIG. 7



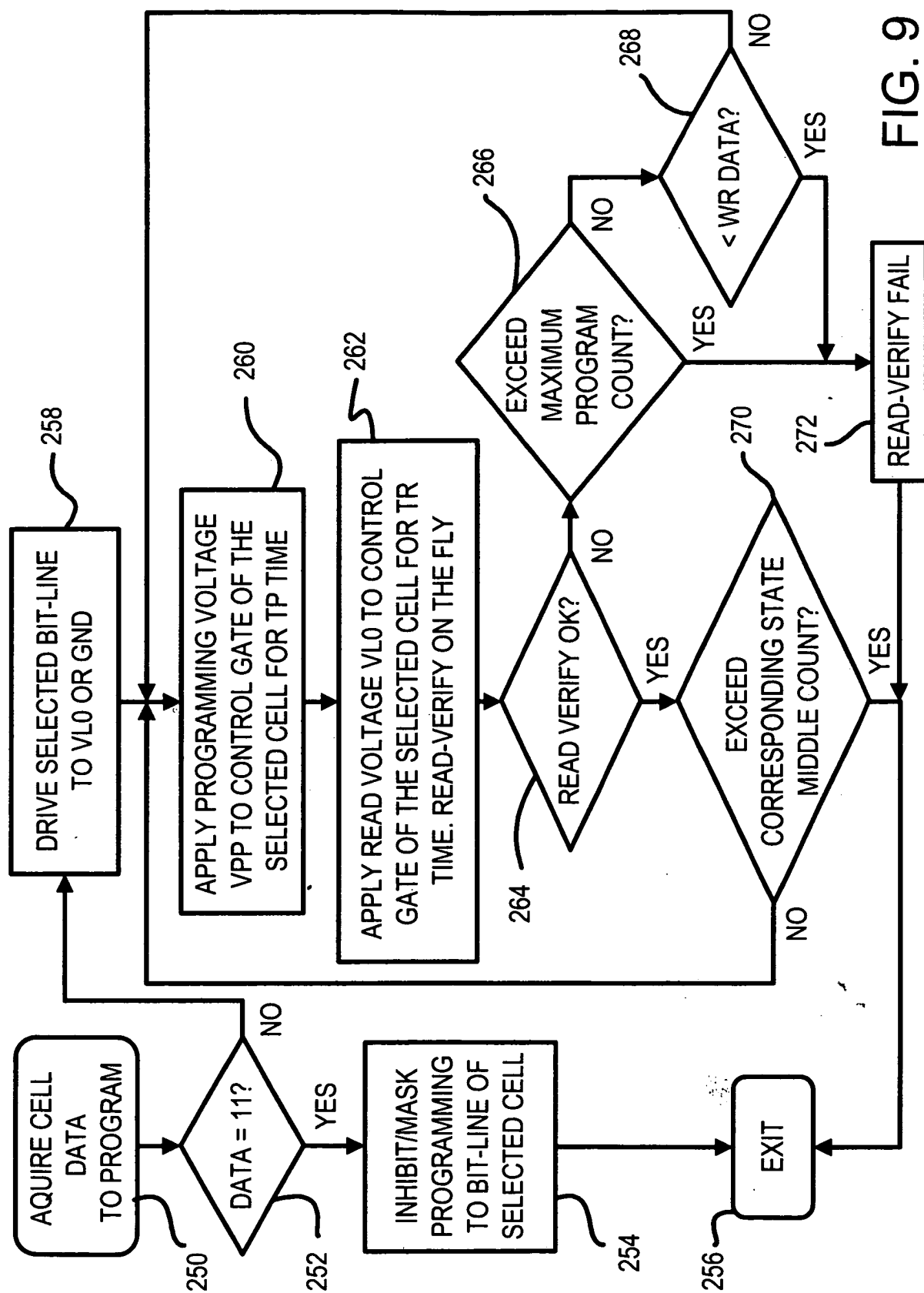


FIG. 9

**FIG. 10**

[illegible]

READ- VERIFY STATE	WR-D1	WR-D0	RD-D1	RD-D0	READ- VERIFY EQUAL	READ- VERIFY LESS
1	0	0	0	0	1	0
2	0	0	0	1	0	0
3	0	0	1	0	0	0
4	0	0	1	1	0	0
5	0	1	0	0	0	1
6	0	1	0	1	1	0
7	0	1	1	0	0	0
8	0	1	1	1	0	0
9	1	0	0	0	0	1
10	1	0	0	1	0	1
11	1	0	1	0	1	0
12	1	0	1	1	0	0
13	1	1	0	0	0	1
14	1	1	0	1	0	1
15	1	1	1	0	0	1
16	1	1	1	1	1	0

**FIG. 11**

CURRENT REFERENCE NODE	CURRENT REFERENCE
RN-IU3	IU3
RN-IL3	IL3 = IU3 + DELTA IL3
RN-IR3	IR3 = IL3 + DELTA IR3
RN-IU2	IU2 = IR3 + DELTA IU2
RN-IL2	IL2 = IU2 + DELTA IL2
RN-IR2	IR2 = IL2 + DELTA IR2
RN-IU1	IU1 = IR2 + DELTA IU1
RN-IL1	IL1 = IU1 + DELTA IL1
RN-IR1	IR1 = IL1 + DELTA IR1
RN-IU0	IU0 = IR1 + DELTA IU0
RN-IL0	IL0 = IU0 + DELTA IL0

**FIG. 12A**

WEIGHT OF ID	1/2	1/4	1/8	1/16	DELTA REFERENCE CURRENT
CALIBRATION CODE	QP31	QP32	QP33	QP34	
0	0	0	0	0	0
1	0	0	0	1	1/16
2	0	0	1	0	2/16
3	0	0	1	1	3/16
4	0	1	0	0	4/16
5	0	1	0	1	5/16
6	0	1	1	0	6/16
7	0	1	1	1	7/16
8	1	0	0	0	8/16
9	1	0	0	1	9/16
10	1	0	1	0	10/16
11	1	0	1	1	11/16
12	1	1	0	0	12/16
13	1	1	0	1	13/16
14	1	1	1	0	14/16
15	1	1	1	1	15/16

**FIG. 12B**

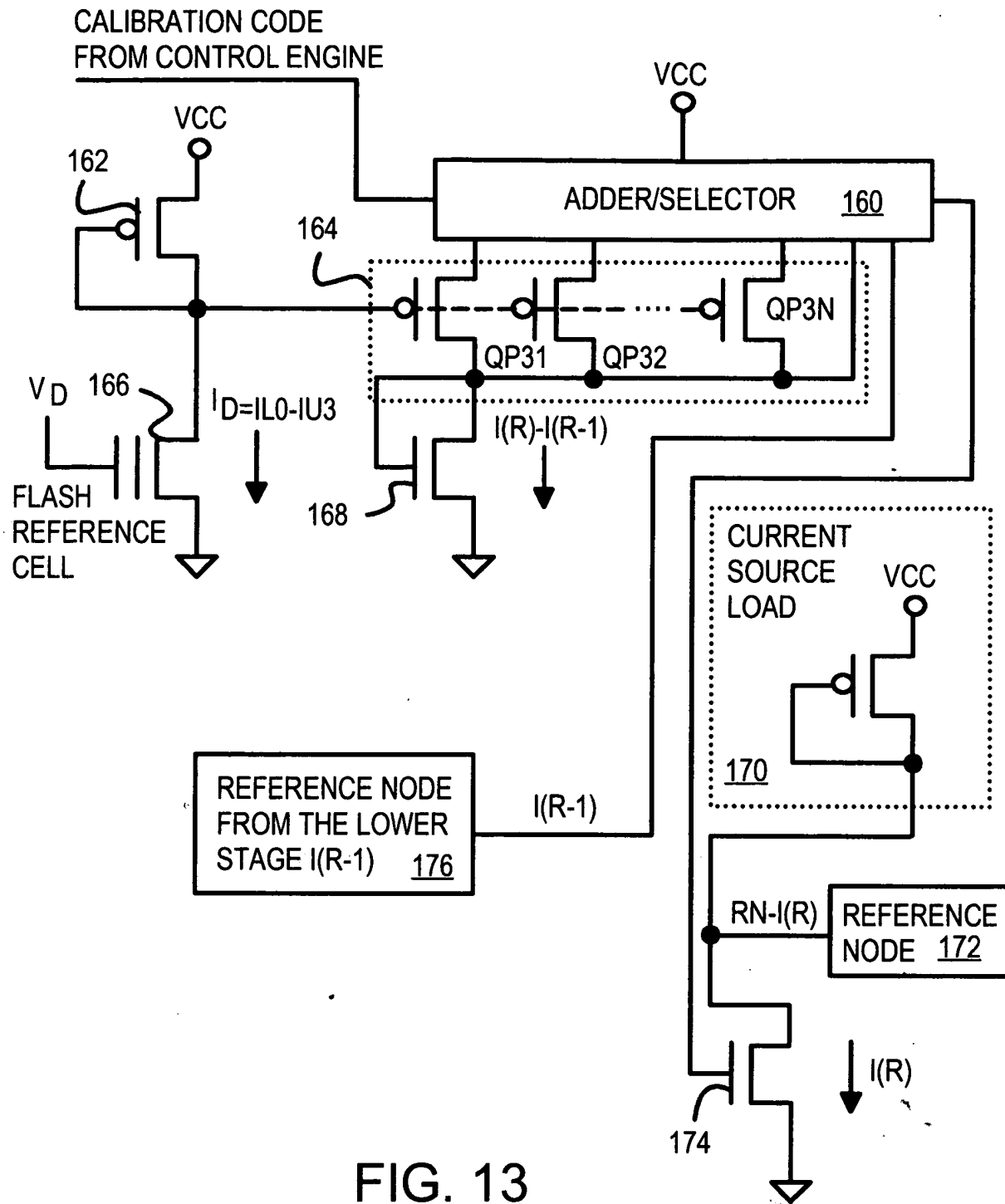


FIG. 13

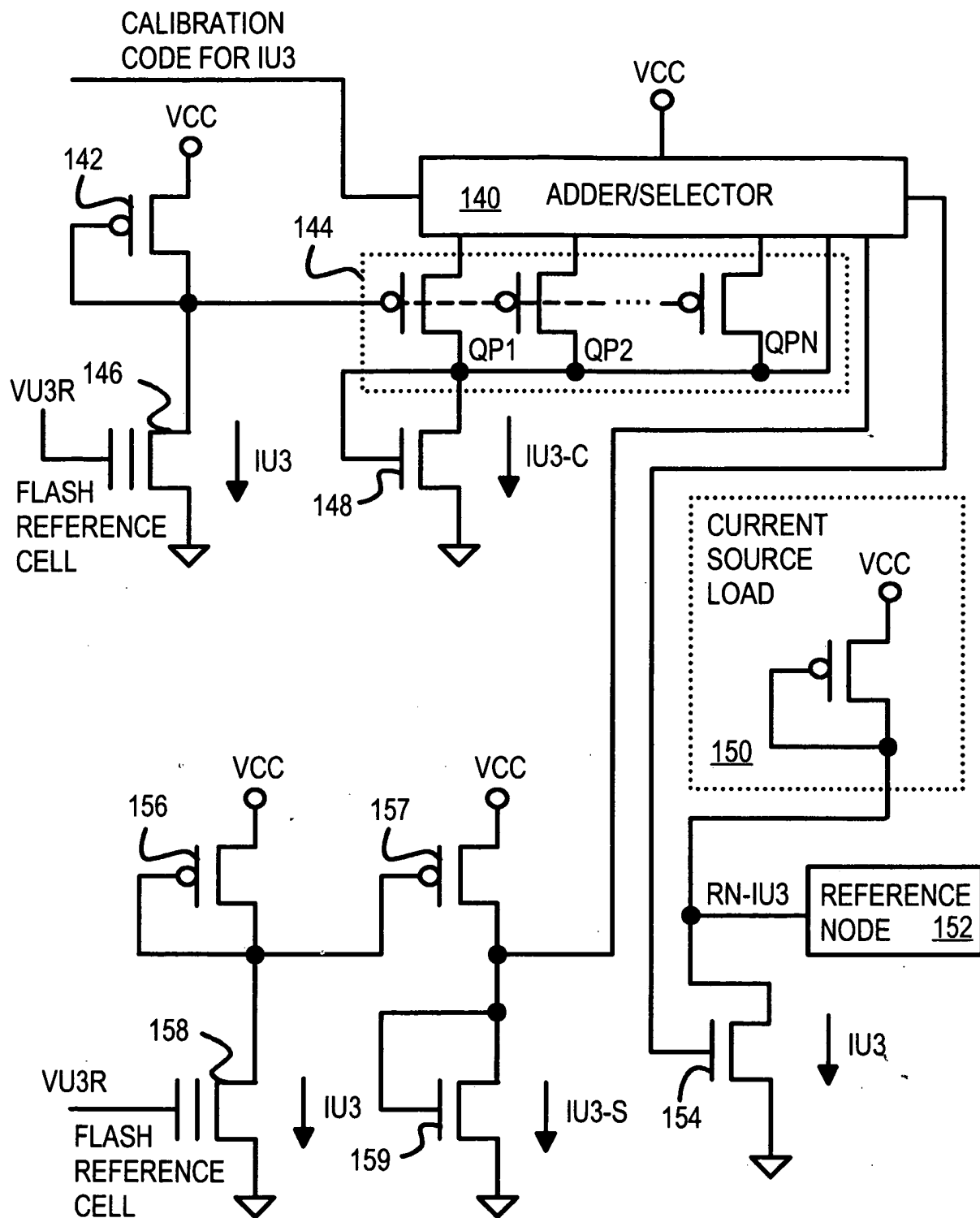


FIG. 14